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FILE COVERS 1907 - 25 Feb 2009 VOL 150 ISS 9  
FILE LAST UPDATED: 24 Feb 2009 (20090224/ED)

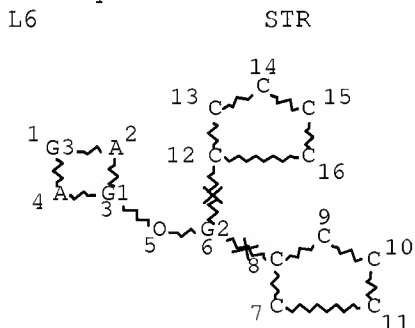
Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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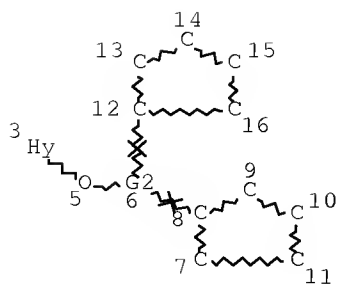
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GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE  
L8 STR



VAR G2=ZR/TI/HF  
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 DEFAULT ECLEVEL IS LIMITED

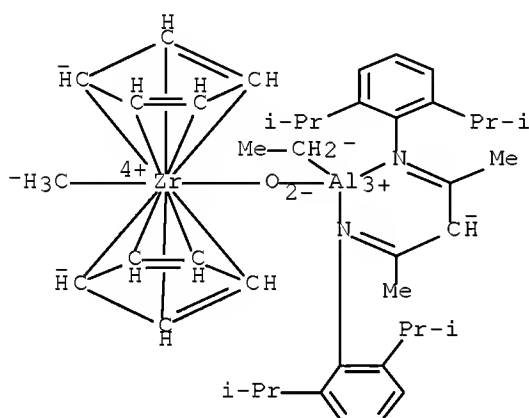
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L11 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2008:439464 CAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 149:32351  
 TITLE: Synthesis, structural characterization, and  
 reactivity of the ethyl substituted aluminum hydroxide and  
 catalytic properties of its derivative  
 AUTHOR(S): Yang, Ying; Gurubasavaraj, Prabhuodeyara M.;  
 Ye, Hongqi; Zhang, Zhensheng; Roesky, Herbert W.;  
 Jones, Peter G.  
 CORPORATE SOURCE: School of Chemistry and Chemical Engineering,  
 Central South University, Changsha, 410083, Peop. Rep.  
 China  
 SOURCE: Journal of Organometallic Chemistry (2008), 693  
 (8-9), 1455-1461  
 CODEN: JORCAI; ISSN: 0022-328X  
 PUBLISHER: Elsevier Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The Et substituted aluminum hydroxide LA1Et(OH) (2; L = HC[C(Me)N  
 (Ar)]2; Ar = 2,6-iPr2C6H3) was prepared by the hydrolysis of LA1Et  
 (Cl) (1) in the presence of a N-heterocyclic carbene. The  
 reaction of 2 with Cp2ZrMe2 in toluene afforded LA1Et(μ-O)ZrMeCp2  
 (3) by evolution of methane, while the reaction of 2 with Cp3M in  
 THF led to the intermol. elimination of HCp and formation of LA1Et  
 (μ-O)M(THF)Cp2 (M = Yb, 4; Er, 5; Dy, 6; Y, 7). Compds. 2·2THF and  
 3 were characterized by single X-ray structural anal. Compound 2·  
 2THF crystallizes in the orthorhombic space group P212121, while  
 compound 3 crystallizes in space group. In both cases, the  
 displacement of the Al and the γ-C atom out of the NCCN plane is

observed in a boat conformation, but with converse direction.  
 Furthermore, compound 3 was used as catalyst for ethylene  
 polymerization  
 IT 1030631-05-0P  
 RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic  
 preparation);  
 PREP (Preparation); USES (Uses)  
 (crystal structure; preparation of aluminum Et diketiminate oxo-  
 bridged  
 zirconium cyclopentadienyl complex with catalytic activity for  
 ethylene  
 polymerization)  
 RN 1030631-05-0 CAPLUS  
 CN Zirconium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[N,N'-(1,3-dimethyl-  
 1,3-  
 propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]] (1-  
 )]ethylaluminum]methyl- $\mu$ -oxo- (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE  
 FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

L11 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2008:93890 CAPLUS Full-text  
 DOCUMENT NUMBER: 148:331785  
 TITLE: Organoaluminum Hydroxides Supported by  
 $\beta$ -Diketiminato Ligands: Synthesis, Structural  
 Characterization, and Reactions  
 AUTHOR(S): Yang, Ying; Schulz, Thomas; John, Michael;  
 Yang, Zhi;  
 Jimenez-Perez, Victor Manuel; Roesky, Herbert  
 W.;  
 Gurubasavaraj, Prabhuodeyara M.; Stalke,  
 Dietmar; Ye,  
 Hongqi  
 CORPORATE SOURCE: School of Chemistry and Chemical Engineering,  
 Central  
 South University, Changsha, 410083, Peop. Rep.  
 China  
 SOURCE: Organometallics (2008), 27(4), 769-777  
 CODEN: ORGND7; ISSN: 0276-7333  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

OTHER SOURCE(S): CASREACT 148:331785

AB Three  $\beta$ -diketiminato ligands ( $L1 = HC[C(Me)N(Ar)]_2$ ,  $Ar = 2,4,6-Me_3C_6H_2$ ;  $L2 = HC[C(Me)N(Ar)]_2$ ,  $Ar = 2,6-iPr_2C_6H_3$ ;  $L3 = HC[C(tBu)N(Ar)]_2$ ,  $Ar = 2,6-iPr_2C_6H_3$ ) were employed to prepare the organoaluminum hydroxides  $LAIR(OH)$  ( $R = Me, Et, Ph, OEt, OSiMe_3$ ) by hydrolysis of the corresponding chlorides in the presence of a N-heterocyclic carbene as HCl scavenger. Reaction of the organoaluminum hydroxide with  $Cp_2ZrMe_2$  in toluene afforded the heterobimetallic oxide  $LAIR(\mu-O)ZrMeCp_2$  under evolution of methane. All compds. were characterized by multinuclear NMR, IR, mass spectrometry, and elemental anal. The structures of  $L1AlPh(OH)$  (10),  $L2AlPh(OH)$  (11),  $L2AlOEt(OH)$  (12),  $L2AlOSiMe_3(OH)$  (13), and  $L2AlPh(\mu-O)ZrMeCp_2$  (17) were determined by single-crystal x-ray diffraction studies. The polymerization of ethylene was studied with compound 17, which exhibits moderate catalytic activity.

IT 1010855-42-1P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(crystal structure; preparation, structural characterization, and reactions

of organoaluminum hydroxides supported by beta-diketiminato ligands)

RN 1010855-42-1 CAPLUS

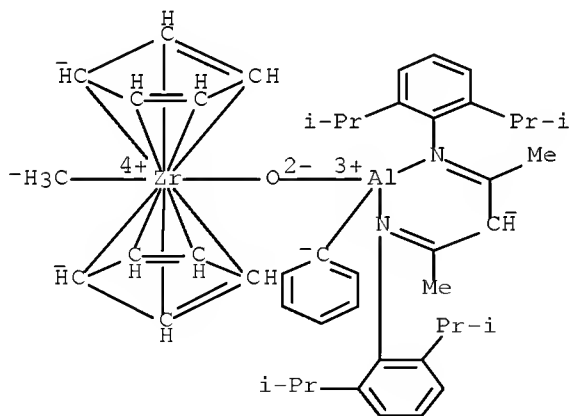
CN Zirconium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[ $[N,N'-(1,3$ -dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa N$ ]] (1-)]phenylaluminum]methyl- $\mu$ -oxo-, compd. with hexane (2:1) (CA INDEX NAME)

CM 1

CRN 1010855-37-4

CMF C46 H59 Al N2 O Zr

CCI CCS



CM 2

CRN 110-54-3

CMF C6 H14

Me—(CH<sub>2</sub>)<sub>4</sub>—Me

IT 1010855-37-4P

RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);

PREP (Preparation); USES (Uses)

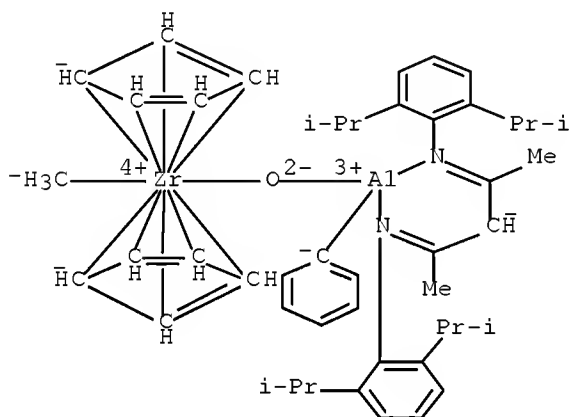
(mol. structure; preparation, structural characterization, and reactions of

organoaluminum hydroxides supported by beta-diketiminato ligands)

RN 1010855-37-4 CAPLUS

CN Zirconium, bis(η<sup>5</sup>-2,4-cyclopentadien-1-yl)[[N,N'-(1,3-dimethyl-1,3-

propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato-κN]](1-)]phenylaluminum)methyl-μ-oxo- (CA INDEX NAME)



IT 1010855-34-1P 1010855-35-2P 1010855-36-3P

1010855-38-5P 1010855-39-6P

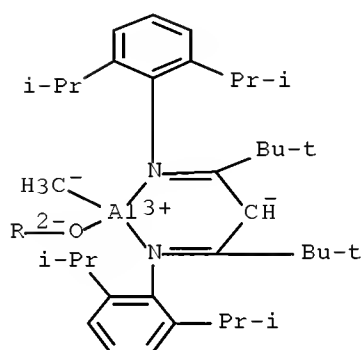
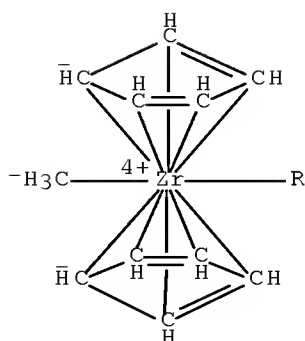
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation, structural characterization, and reactions of organoaluminum

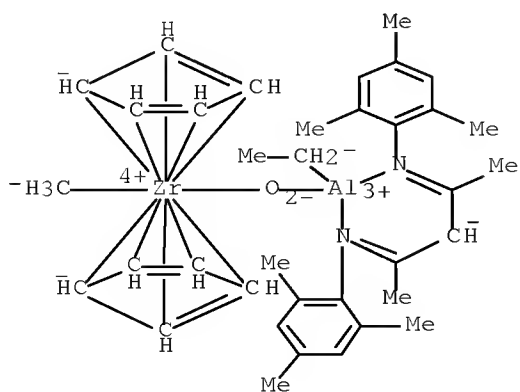
hydroxides supported by beta-diketiminato ligands)

RN 1010855-34-1 CAPLUS

CN Zirconium, [[N,N'-(1,3-bis(1,1-dimethylethyl)-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato-κN]](1-)]methylaluminum]bis(η<sup>5</sup>-2,4-cyclopentadien-1-yl)methyl-μ-oxo- (CA INDEX NAME)



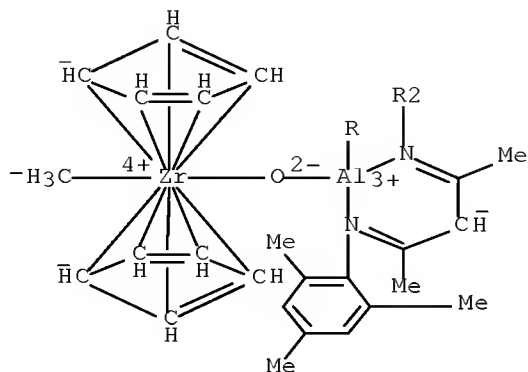
RN 1010855-35-2 CAPLUS  
 CN Zirconium, bis(η<sup>5</sup>-2,4-cyclopentadien-1-yl) [[[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,4,6-trimethylbenzenaminato-κN]] (1-)]ethylaluminum]methyl-μ-oxo- (CA INDEX NAME)



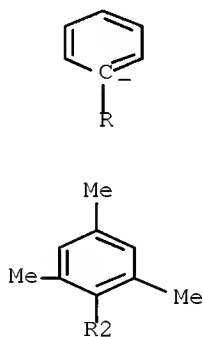
RN 1010855-36-3 CAPLUS

CN Zirconium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[ [N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,4,6-trimethylbenzenaminato- $\kappa$ N]] (1-)]phenylaluminum]methyl- $\mu$ -oxo- (CA INDEX NAME)

PAGE 1-A

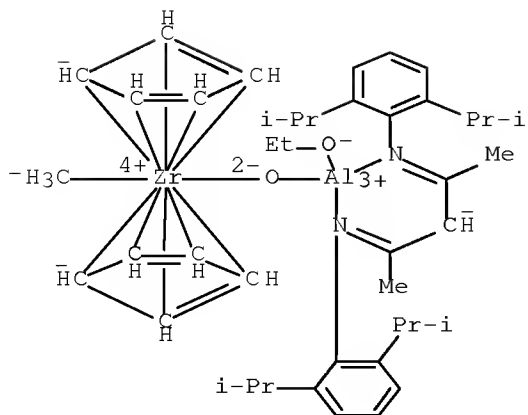


PAGE 2-A

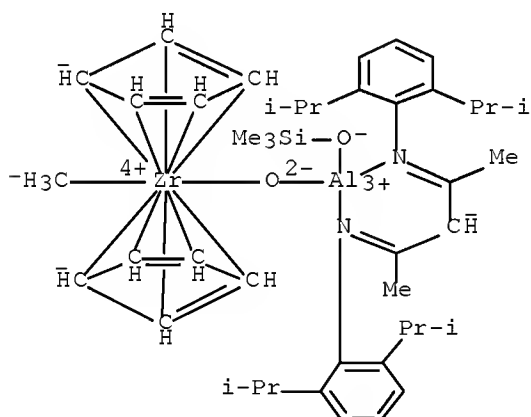


RN 1010855-38-5 CAPLUS

CN Zirconium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[ [N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]] (1-)]ethoxyaluminum]methyl- $\mu$ -oxo- (CA INDEX NAME)



RN 1010855-39-6 CAPLUS  
 CN Zirconium, bis(η<sup>5</sup>-2,4-cyclopentadien-1-yl) [[ [N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato-κN]] (1-)] (1,1,1-trimethylsilanolato)aluminum]methyl-μ-oxo- (CA INDEX NAME)



REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L11 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2007:72698 CAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 146:337951  
 TITLE: Synthesis, Structural Characterization, Catalytic Properties, and Theoretical Study of Compounds Containing an Al-O-M (M = Ti, Hf) Core  
 AUTHOR(S): Gurubasavaraj, Prabhuodeyara M.; Mandal, Swadhin K.; Roesky, Herbert W.; Oswald, Rainer B.; Pal, Aritra; Noltemeyer, Mathias  
 CORPORATE SOURCE: Institut fuer Anorganische Chemie,



Georg-August-Universitaet Goettingen,  
 Goettingen,  
 37077, Germany  
 SOURCE: Inorganic Chemistry (2007), 46(4), 1056-1061  
 CODEN: INOCAJ; ISSN: 0020-1669  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 146:337951

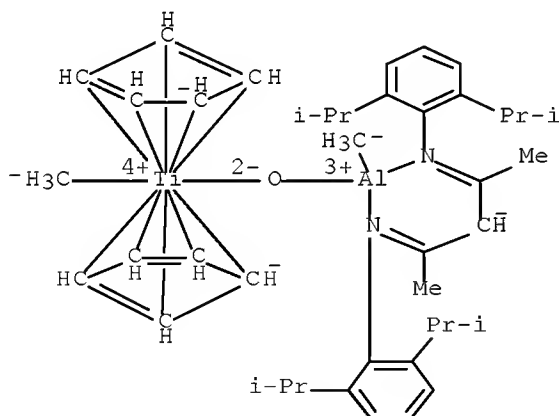
AB Two single O-bridged heterobimetallic oxides of Al(III) with Group 4 metals (Ti, Hf) were prepared. The reaction of  $\text{LAlMeOH}$  (1) ( $\text{LH} = \text{ArN:CMech}_2\text{CMe:NAr}$ ,  $\text{Ar} = 2,6\text{-iPr}_2\text{C}_6\text{H}_3$ ) with dimethylmetallocenes of Ti and Hf in toluene ( $80^\circ$ ) and ether (room temperature), resp., gave  $\text{LAl(Me)(}\mu\text{-O)M(Me)Cp}_2$  [ $\text{M} = \text{Ti}$  (2),  $\text{Hf}$  (3)] in moderate to good yield. Compds. 2 and 3 were characterized by elemental anal., IR, NMR ( $^1\text{H}$  and  $^{13}\text{C}$ ), EI-MS, and single-crystal x-ray structural anal. Furthermore, compound 2 showed good catalytic activity in ethylene and styrene homopolymerization, while compound 3 is less active in ethylene polymerization. The styrene polymerization yields atactic polystyrene.

IT 929199-21-3P

RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);  
 PREP (Preparation); USES (Uses)  
 (crystal structure, DFT study; synthesis, structural characterization,  
 olefin polymerization catalytic properties, and theor. study of  
 aluminum-titanium and hafnium heterodinuclear oxo-bridged  
 diiminato cyclopentadienyl complexes)

RN 929199-21-3 CAPLUS

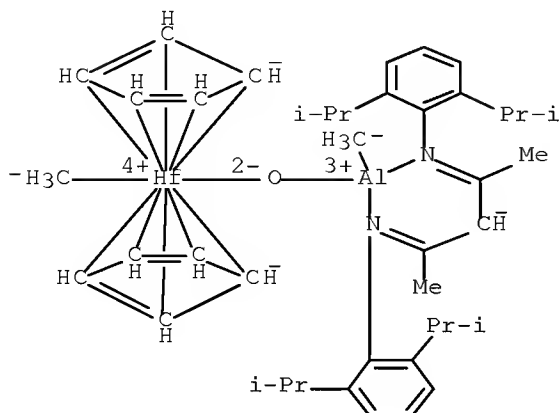
CN Titanium, bis( $\eta^5\text{-2,4-cyclopentadien-1-yl}$ )[[ $[\text{N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato-}\kappa\text{N}]](1\text{-})\text{methylaluminum}]\text{methyl-}\mu\text{-oxo-}$  (CA INDEX NAME)



IT 929199-22-4P

RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);  
 PREP (Preparation); USES (Uses)  
 (crystal structure; synthesis, structural characterization,  
 olefin  
 polymerization catalytic properties, and theor. study of  
 aluminum-titanium and  
 hafnium heterodinuclear oxo-bridged diiminato cyclopentadienyl

complexes)  
 RN 929199-22-4 CAPLUS  
 CN Hafnium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]] (1-)]methylaluminum]methyl- $\mu$ -oxo- (CA INDEX NAME)



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE  
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L11 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:1069169 CAPLUS Full-text  
 DOCUMENT NUMBER: 143:478022  
 TITLE: Preparation of heterobimetallic  
 oxide-hydroxide-hydrogensulfides  
 [LAl(OH)( $\mu$ -O)MCp2(SH)] (M = Ti, Zr)  
 AUTHOR(S): Jancik, Vojtech; Roesky, Herbert W.  
 CORPORATE SOURCE: Institut fuer Anorganische Chemie der  
 Universitaet,  
 Goettingen, 37077, Germany  
 SOURCE: Angewandte Chemie, International Edition  
 (2005),  
 44(37), 6016-6018  
 CODEN: ACIEF5; ISSN: 1433-7851

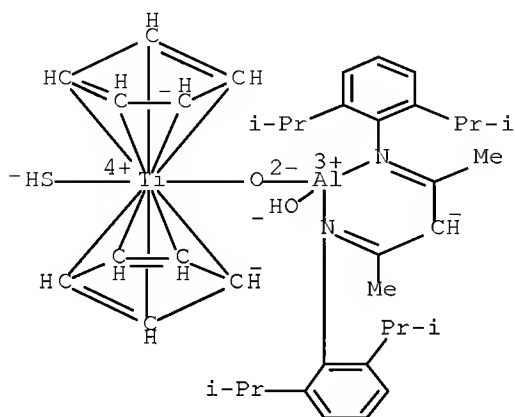
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 143:478022

AB Oxo-bridged N,N'-diaryl diketiminate aluminum-titanocene and  
 aluminum-zirconocene hydroxide-hydrosulfide complexes were  
 prepared by controlled hydrolysis of bis-sulfido-bridged  
 complexes. Hydrolysis of [LAl( $\mu$ -S)2MCp2] (LH = MeC(:NAr)CH2C  
 (:NAr)Me, where Ar = 2,6-iPr2C6H3; 1 M = Ti, 2 M = Zr) with two  
 equiv of water gave smoothly the ring opening and chalcogen  
 exchange products, the heterobimetallic oxide-hydroxide-  
 hydrogensulfides [LAl(OH)( $\mu$ -O)MCp2(SH)] (3, 4; M = Ti, Zr),  
 identity of which were confirmed by x-ray crystallog. The  
 mechanism of the hydrolysis comprises the intermediacy of [LAl(SH)  
 ( $\mu$ -O)MCp2(SH)], which liberates H2S upon reaction with water.

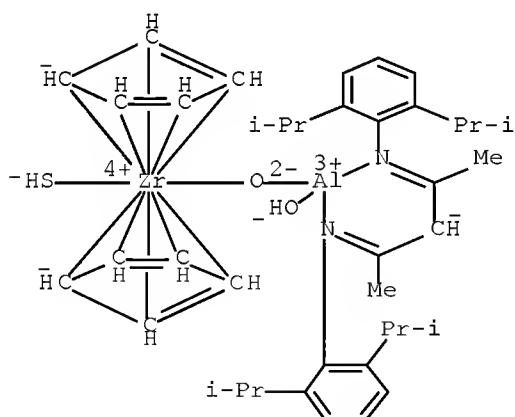
IT 869493-72-1P 869493-74-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP  
 (Preparation)  
 (crystal structure; preparation of aluminum-titanocene and

aluminum-zirconocene diketiminate oxo-bridged hydroxides and hydrosulfides by hydrolysis of bis-sulfido-bridged complexes)  
 RN 869493-72-1 CAPLUS  
 CN Titanium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]] (1-)]hydroxyaluminum]mercapto- $\mu$ -oxo- (9CI) (CA INDEX NAME)

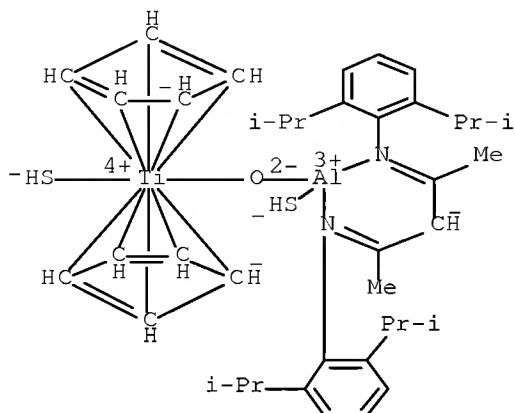


RN 869493-74-3 CAPLUS  
 CN Zirconium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]] (1-)]hydroxyaluminum]mercapto- $\mu$ -oxo- (9CI) (CA INDEX NAME)

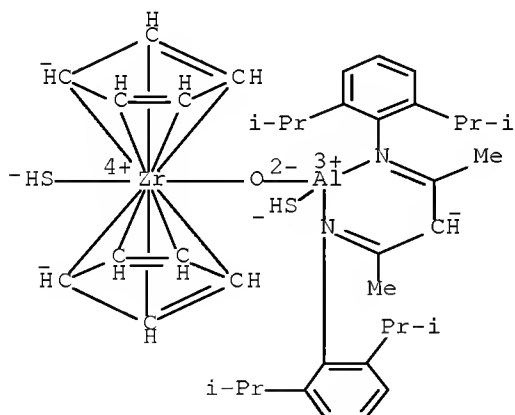


IT 869493-75-4P 869493-76-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (intermediate; preparation of aluminum-titanocene and aluminum-zirconocene diketiminate oxo-bridged hydroxides and hydrosulfides by hydrolysis of bis-sulfido-bridged complexes)

RN 869493-75-4 CAPLUS  
 CN Titanium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]] (1-)]mercaptoaluminum]mercapto- $\mu$ -oxo- (9CI) (CA INDEX NAME)



RN 869493-76-5 CAPLUS  
 CN Zirconium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]] (1-)]mercaptoaluminum]mercapto- $\mu$ -oxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

L11 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:1042261 CAPLUS Full-text  
 DOCUMENT NUMBER: 143:347601  
 TITLE: Oxygen-bridged bimetallic complex, the  
 production thereof and its utilization for polymerization

INVENTOR(S): catalysis  
 Roesky, Herbert; Bai, Guangcai; Jancik,  
 Vojtech;  
 PATENT ASSIGNEE(S): Singh, Sanjay  
 SOURCE: Georg-August-Universitaet Goettingen, Germany  
 PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005090373	A1	20050929	WO 2005-EP2741	
20050315				
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, MR, NE, SN, TD, TG			
EP 1725571	A1	20061129	EP 2005-716071	
20050315				
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US 20080261804	A1	20081023	US 2008-593029	
20080522				
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20041119			WO 2005-EP2741	W
20050315				

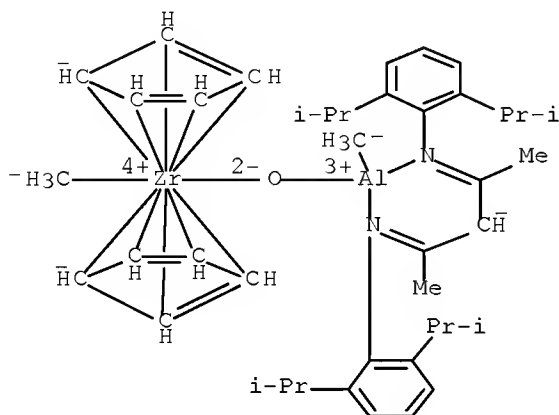
OTHER SOURCE(S): MARPAT 143:347601  
 AB The binuclear, oxygen-bridged, hetero-bimetallic complexes of general formula [(LM1R1)(Cp2M2R2)]( $\mu$ -O) (M1 = Al, Ge, Zr or Ti; M2 = Zr, Ti or Hf; Cp = cyclopentadienyl; R1, R2 = Me, Et, iso-Pr, tert-Bu, halogen, Ph, alkylphenyl, SiMe3; L = bidentate, doubly nitrogen-coordinated organochem. ligand, which together with metal M1 form a 5- or 6-membered ring) are suitable as polymerization catalysts for olefin polymerization. These complexes have very good catalytic activity, good useful life and require less amts. of cocatalysts.  
 IT 849927-38-4P 849927-39-5P  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);  
 USES (Uses)  
 (oxygen-bridged bimetal complexes of metallocenes for catalysts)

for

polymerization of olefins)

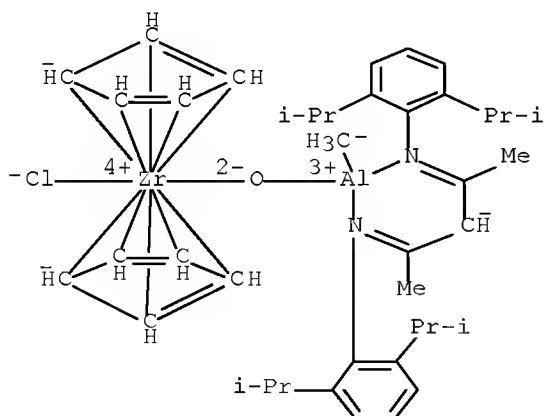
RN 849927-38-4 CAPLUS

CN Zirconium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]]methylaluminum]methyl- $\mu$ -oxo- (9CI) (CA INDEX NAME)



RN 849927-39-5 CAPLUS

CN Zirconium, chlorobis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]]methylaluminum]- $\mu$ -oxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS

FORMAT

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L11 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:309741 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 143:26680

TITLE: OH Functionality of Germanium(II) Compounds for the

AUTHOR(S): Formation of Heterobimetallic Oxides  
 Pineda, Leslie W.; Jancik, Vojtech; Roesky,  
 Herbert  
 W.; Herbst-Irmer, Regine  
 CORPORATE SOURCE: Institut fuer Anorganische Chemie,  
 Georg-August-Universitaet Goettingen,  
 Goettingen,  
 37077, Germany  
 SOURCE: Inorganic Chemistry (2005), 44(10), 3537-3540  
 CODEN: INOCAJ; ISSN: 0020-1669  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 143:26680

AB Two novel Ge(II)  $\mu$ -oxo heterobimetallic oxides with different oxidation states at the metal centers are reported. The reaction of  $\text{LGeOH}$  [ $\text{L} = \text{N}(\text{Ar})\text{C}(\text{Me})\text{CHC}(\text{Me})\text{N}(\text{Ar})$  ( $\text{Ar} = 2,6\text{-i-Pr}_2\text{C}_6\text{H}_3$ )] with  $\text{Cp}_2\text{MMe}_2$  ( $\text{M} = \text{Zr}, \text{Hf}$ ) in  $\text{Et}_2\text{O}$  afforded  $\text{LGeOM}(\text{Me})\text{Cp}_2$  [ $\text{M} = \text{Zr}$  (2),  $\text{Hf}$  (3)] in moderate yield. Compds. 2 and 3 were characterized by elemental anal., IR, NMR, EI-MS, and single x-ray structural anal. Compds. 2 and 3 crystallized in the space group  $P2_1$ , and the geometry at the metal centers is tetrahedral. The Ge-O bond lengths of 2 and 3 are very similar (1.797(2) and 1.799(3) Å, resp.), and a bent M-O-M' angle in 2 (143.8(1)°) and 3 (141.9(2)°) features both oxide systems. Different orientations of the Cp and Me groups of the metal centers were observed, and deviations of the Cp groups were exhibited.

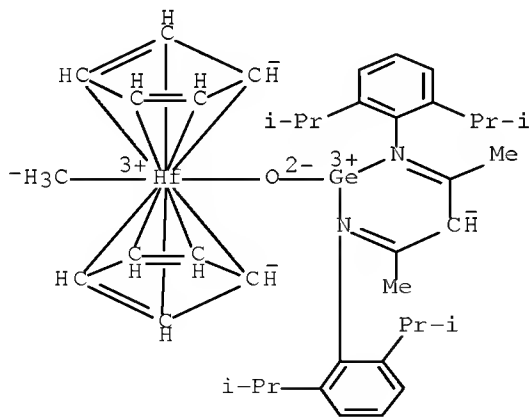
IT 852930-16-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP  
 (Preparation)

(crystal structure; reaction of beta-diketiminatogermanium with methylated hafnocene to give bridging-oxo heterobimetallic oxide system)

RN 852930-16-6 CAPLUS

CN Hafnium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa\text{N}$ ]] (1-)]germanium]methyl- $\mu$ -oxo- (9CI) (CA INDEX NAME)

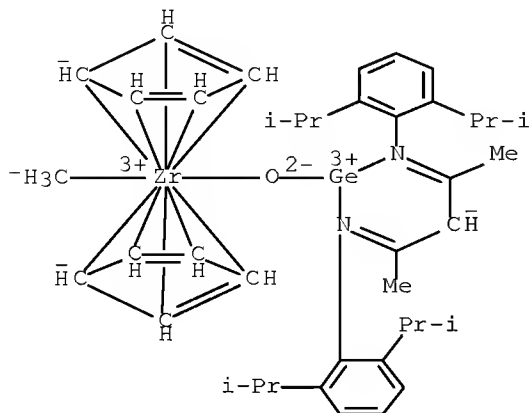


IT 852930-15-5P

RL: PRP (Properties); SPN (Synthetic preparation); PREP  
 (Preparation)

(crystal structure; reaction of beta-diketiminatogermanium with methylated zirconocene to give bridging-oxo heterobimetallic oxide)

system)  
 RN 852930-15-5 CAPLUS  
 CN Zirconium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl)[[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]](1-)]germanium]methyl- $\mu$ -oxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
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L11 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:139458 CAPLUS Full-text  
 DOCUMENT NUMBER: 142:392702  
 TITLE: Mononuclear Aluminum Hydroxide for the Design of  
 Well-Defined Homogeneous Catalysts  
 AUTHOR(S): Bai, Guangcai; Singh, Sanjay; Roesky, Herbert W.;  
 CORPORATE SOURCE: Institut fuer Anorganische Chemie, Universitaet  
 Goettingen, Goettingen, D-37077, Germany  
 SOURCE: Journal of the American Chemical Society  
 (2005),  
 127(10), 3449-3455  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 142:392702

AB An unprecedented aluminum hydroxide  $\text{LAlMe}(\text{OH})$  (5;  $\text{L} = \text{HC}[(\text{CMe})(2,6\text{-iPr}_2\text{C}_6\text{H}_3\text{N})]_2$ ) has been prepared by the hydrolysis of  $\text{LAlMeCl}$  (4). For the preparation of 5, the reagents of KOH, water, and KH, as well as the two-phase ammonia/toluene system, were used. Further reactions of 5 with  $\text{Cp}_2\text{ZrMe}_2$  (8) and  $\text{Cp}_2\text{ZrHCl}$  in toluene lead to the intermol. elimination of  $\text{CH}_4$  and  $\text{H}_2$  and the formation of  $\mu$ -O-bridged dinuclear aluminum and zirconium complexes [ $\text{LAlMe}(\mu\text{-O})\text{ZrMeCp}_2$ ] (6) and [ $\text{LAlMe}(\mu\text{-O})\text{ZrClCp}_2$ ] (7), resp., in high yields. The crystal structure reveals that 5 is a monomer with terminal OH and Me groups. The X-ray structure anal. shows that 6 and 7 contain a bent Al-( $\mu$ -O)-Zr core with terminal Al-Me and Zr-Me or Zr-Cl arrangements. The methylalumoxane (MAO)-activated compds. 6 and 7 exhibit high catalytic activity for the



polymerization of ethylene. Under comparable polymerization conditions, the MAO/6 and MAO/7 catalyst systems show considerably higher activity and much lower MAO:catalyst ratios than that of MAO/8.

IT 849927-38-4P 849927-39-5P

RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);

PREP (Preparation); USES (Uses)

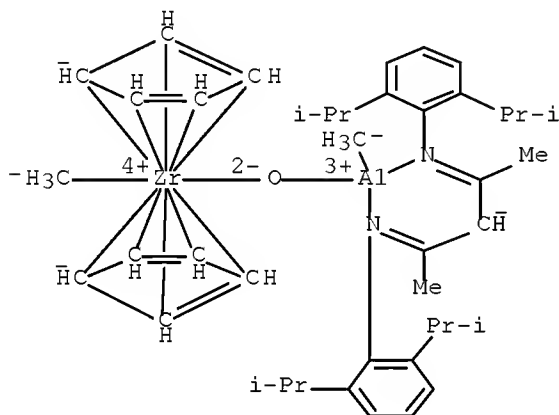
(crystal structure; mononuclear aluminum hydroxide for the design of

well-defined homogeneous heterobimetallic catalysts)

RN 849927-38-4 CAPLUS

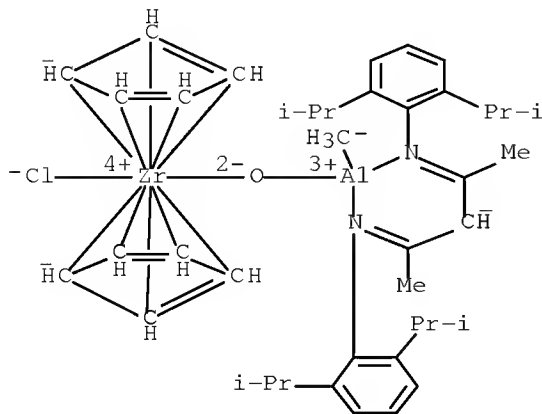
CN Zirconium, bis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[N,N'-(1,3-dimethyl-1,3-

propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]]methylaluminum]methyl- $\mu$ -oxo- (9CI) (CA INDEX NAME)



RN 849927-39-5 CAPLUS

CN Zirconium, chlorobis( $\eta^5$ -2,4-cyclopentadien-1-yl) [[N,N'-(1,3-dimethyl-1,3-propanediylidene)bis[2,6-bis(1-methylethyl)benzenaminato- $\kappa$ N]]methylaluminum]- $\mu$ -oxo- (9CI) (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 18:10:05 ON 25 FEB 2009)

FILE 'CAPLUS' ENTERED AT 18:10:12 ON 25 FEB 2009

E US2008-593029/APPS

L1 1 SEA SPE=ON ABB=ON PLU=ON US2008-593029/AP  
SEL RN

FILE 'REGISTRY' ENTERED AT 18:10:24 ON 25 FEB 2009

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5/BI

OR 37342-97-5/BI OR 7440-32-6/BI OR 7440-56-4/BI OR

7440-58-6/B

I OR 794534-83-1/BI OR 844867-43-2/BI OR 849927-38-4/BI

OR

849927-39-5/BI OR 9002-88-4/BI OR 917-65-7/BI)

L3 STR

L4 0 SEA SSS SAM L3

L5 0 SEA SSS FUL L3

D QUE

L6 STR

L7 11 SEA SSS SAM L6

L8 STR L6

L9 1 SEA SSS SAM L6 AND L8

D SCA

L10 18 SEA SSS FUL L6 AND L8

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FILE 'WPIX' ENTERED AT 18:22:11 ON 25 FEB 2009

L12 0 SEA SSS SAM L6 AND L8

L13 0 SEA SSS FUL L6 AND L8

FILE 'CAPLUS' ENTERED AT 18:22:41 ON 25 FEB 2009

D QUE L11

D L11 IBIB ABS HITSTR TOT